

Math Grade 4 D

Grade Level Standard(s):

KY.4.OA.5

Materials:

- Math 4 D Carlos' Shape Pattern
- Math 4 D Attainment Task Questions for Student Use

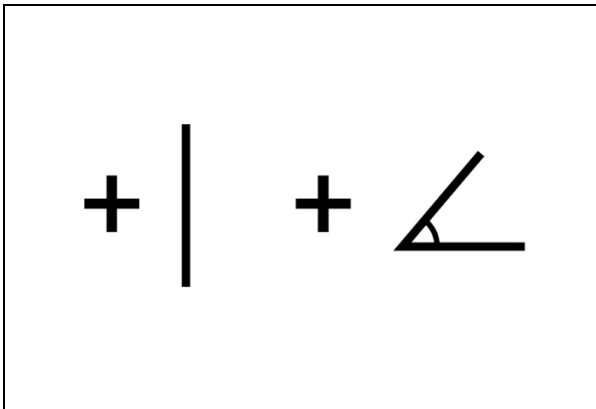
Response Code:

- Indicate the answer provided by the student.

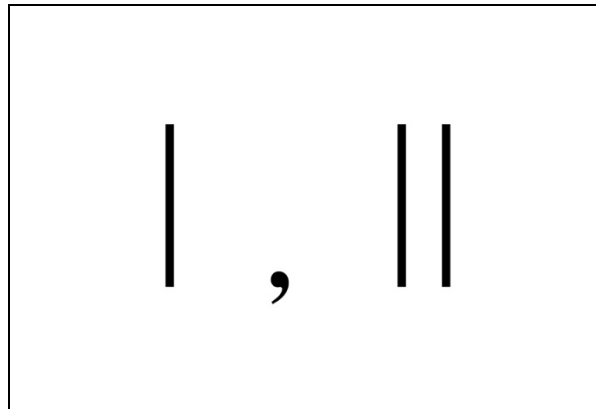
Text Coding:

- "Quotation marks" indicate the script that the teacher should read to the student.
- *Italicized text* provides further direction for the test administrator.
- Words in parenthesis () are optional; they may replace or be read in addition to the word(s) immediately preceding.

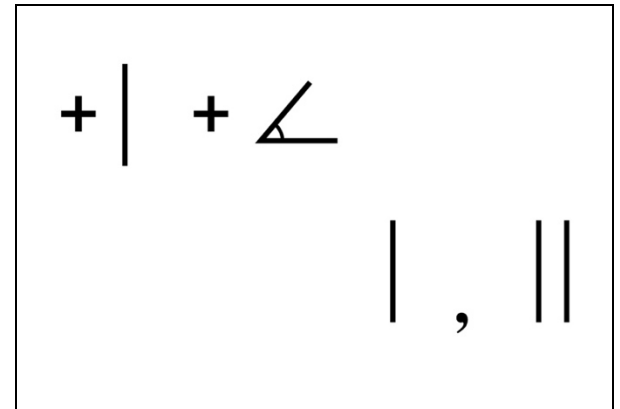
a. Each time he added a side he added an angle.



b. The number of sides in the shapes alternates (changes) between odd and even.



c. Both a. and b.



Before beginning task administration, please ensure that all conditions specified in the administration protocol (starting on page 10 of the Administration Guide Overview and Attainment Task Administration) have been met. Inform the student that the task is about to start by saying, “We are about to start the task, and I am going to ask you some questions.”

All questions from this task are available for presentation to the student in the supplemental material Math 4 D Attainment Task Questions for Student Use.

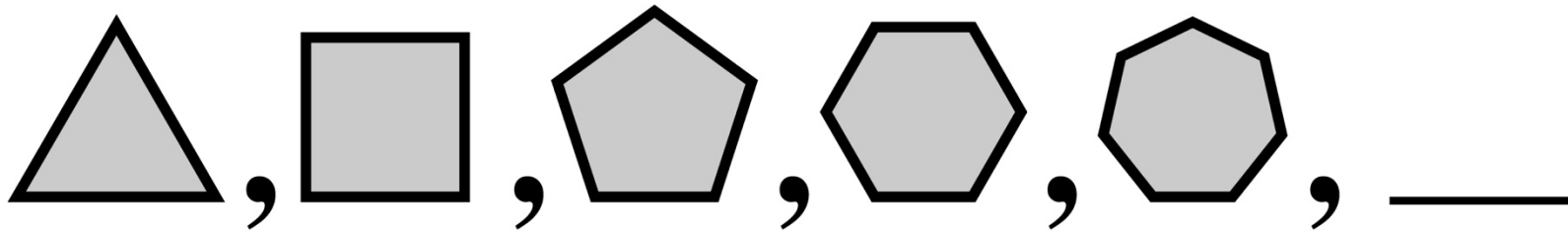
“Carlos’ class is learning about the attributes of two-dimensional figures.”

Present the student with Math 4 D Carlos’ Shape Pattern.

5. “The rule for Carlos’ pattern is to add a side to create the next shape. What else do you notice about Carlos’s pattern?”

Response Option	<i>Response Rationale</i>
a. Each time he added a side he added an angle.	<i>The student identifies that each time a side is added so is an angle but does not identify that the number of sides alternates between odd and even.</i>
b. The number of sides in the shapes alternates (changes) between odd and even.	<i>The student identifies that the number of sides alternates between odd and even but does not identify that each time a side is added so is an angle.</i>
c. Both a. and b. (Correct)	<i>The student correctly identifies both that every time a side is added so is an angle and that the number of sides alternates between odd and even.</i>
<i>Depth of Knowledge (DOK) 3</i>	

Math 4 D Carlos' Shape Pattern



Math 4 D Attainment Task Questions for Student Use

5. The rule for Carlos' pattern is to add a side to create the next shape. What else do you notice about Carlos's pattern?

Kentucky Academic Standard: KY.4.OA.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern not explicit in the rule itself. **MP.2, MP.3**

Alternate Assessment Target: Limit to identifying and extending a rule or pattern.

Student Group	Number of Students	Percent Correct
All Students	488	48.36%
Gender		
Female	159	50.31%
Male	329	47.42%
Ethnicity		
African American	53	39.62%
American Indian or Alaska Native	<10	Not Reported
Asian	13	53.85%
Hispanic of Latino	<10	Not Reported
Native Hawaiian of Pacific Islander	<10	Not Reported
White (Non-Hispanic)	367	50.14%
Two or More Races	52	46.15%
English Learner	28	53.57%
Economically Disadvantaged	394	49.24%

*Number of students that attempted the item